

COPY



100 GROVE ST. | WORCESTER, MA 01605

July 6, 2019

Joseph Laydon
Town Planner
Grafton Municipal Center
30 Providence Road
Grafton, MA 01519

EXHIBIT 19

T 508-856-0321

F 508-856-0357

gravesengineering.com

RECEIVED

**Subject: Wireless Telecommunications Facility
84 Snow Road
Special Permit and Site Plan Review**

JUL - 8 2019

Dear Joe:

PLANNING BOARD
GRAFTON, MA

We received the following documents on June 4, 2019:

- Plans entitled Relocation Project Drawings, Proposed 143-FT Monopole, 84 Snow Road, Grafton, MA 01536 dated May 31, 2019, prepared by Delta Oaks Group for Crown Castle USA, Inc. (13 sheets)
- Correspondence from McLane Middleton to Town of Grafton Planning Board dated May 28, 2019 Re: Proposed Wireless Communication Facility Application, with attachments.

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' conformance with applicable "Grafton Zoning By-Law" amended through October 15, 2018; Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and standard engineering practices. GEI was authorized to proceed with this review on June 12, 2019. As part of our review GEI visited the site on June 19, 2019.

Our comments follow:

Zoning By-Law

1. The application included a list of waiver requests. GEI understands that waiver requests will be addressed by the Planning Board. Please note, GEI does not have any civil engineering-related issues with the waiver requests except for the waiver requests relative to §1.3.3.3.d.25 and §1.3.3.3.e. Please see more detailed discussion at Comment #6 herein.
2. The locus maps presented on the cover sheet need to include a scale. (§1.3.3.3.d.8)
3. Construction-phase employee parking and loading areas must be shown on the plans. Except during the initial phase of site preparation to create usable access, employee parking must not occur on Snow Road and unloading from Snow Road must not occur to the extent possible. (§1.3.3.3.d.19)
4. The project narrative states that a light will be proposed to illuminate the equipment area during service visits, the location and intensity of the light needs to be shown on the plans. (§1.3.3.3.d.22)

x:\shared\projects\graffonpb\snow road 84\docs\070619sr84.docx

5. The proposed electric service connection to the facility must be shown on the plans. (§1.3.3.3.d.28)

Hydrology & MassDEP Stormwater Management

6. Documentation needs to be submitted to demonstrate the project's compliance with applicable MassDEP Stormwater Standards and to demonstrate that the proposed drainage system connection at Greany Drive will not negatively impact the Town's drainage system.
7. To not compromise the total suspended solids (TSS) removal capacity of the existing Greeny Drive catch basin, the proposed connection to the Greany Drive drainage system needs to occur at a manhole instead of a catch basin.
8. The catch basin construction detail on Sheet C-6 needs to be revised to provide a four-foot-deep sump instead of a twelve-inch-deep sump. Also, a catch basin hood is needed.
9. Consideration should be given to incorporating check dams (e.g. stone check dams) into the drainage ditches to create small settling areas for increased total suspended solids removal.

General Engineering Comments

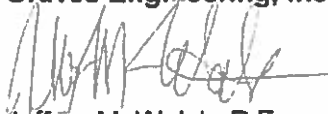
10. On Sheet C-2.1, at the project entrance the existing 391-foot topographic contour crosses the driveway near the back of the sidewalk. However, a proposed 391-foot contour crosses the driveway in the grass strip between the sidewalk and the road, indicating a fill condition and raising of the sidewalk. The location of the proposed 392-foot contour indicates that the sidewalk would be raised approximately one foot. The existing elevations of the sidewalk and grass strip need to be maintained except for the provision of a driveway apron (would be a shallow cut condition) between the sidewalk and the road.
11. To protect the Greany Drive road and sidewalk, and to minimize the potential for tracking sediment onto public ways during and after construction, the first two-hundred feet of the project driveway should be paved rather than left as a gravel surface.
12. On Sheet GN-1, Seedbed Preparation Note #8 refers to a permanent seeding specification on Sheet C-9. A seeding specification was not included on Sheet C-9.

General Comments

13. GEI did not review the structural or electrical information associated with the wireless telecommunications equipment. Such reviews are beyond the scope of this civil engineering-related site plan review.
14. If not already done, the Planning Board may wish to solicit comments from the Fire Department relative to site access and driveway grades. The driveway grade near the equipment compound (where emergency vehicles may stage during a response to the compound) will be up to approximately 13%. Furthermore, there will be an abrupt change in grade (to approximately 11%) near the project entrance. A profile of the driveway should be prepared and an evaluation made of the clearance under the largest Fire Department vehicle that would be expected to enter the site. The Fire Department's engines and Tower 1 apparatus have long overhangs at the rear of the vehicles that could be susceptible to "bottoming out". A more gradual change in grade may be needed.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Very truly yours,
Graves Engineering, Inc.

A handwritten signature in dark ink, appearing to read 'Jeffrey M. Walsh', written over a horizontal line.

Jeffrey M. Walsh, P.E.
Principal

Cc: Victor Manougian, Esq.; McLane Middleton